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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,319	09/19/2003	Robert Edward Wilson	10030442-1	7914
57299 7590 04/09/2007 AVAGO TECHNOLOGIES, LTD. P.O. BOX 1920 DENVER, CO 80201-1920			EXAMINER CHIEM, DINH D	
			ART UNIT	PAPER NUMBER
			2883	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/09/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/666,319

Applicant(s)

WILSON ET AL.

Examiner

Erin D. Chiem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This office action is in response to applicant's remarks filed on January 11, 2007.

Currently, claims 1-5 and 7-9 are pending.

#### ***Response to Arguments***

Applicant's arguments filed on January 11, 2007 have been fully considered but they are not persuasive. Applicant's main argument is the citation of the Abstract does not teach the limitation "a ferrule of a fiber optic connector is inserted into aperture 32 of can 30."

Examiner's response is as follows: The full Abstract is cited herein below:

A device or array of arrayed optical subassemblies includes modular units called one channel sub-assemblies. Each of the one channel sub-assemblies includes a small format optical subassembly attached to a substrate and an optical coupling element all of which is connected to a base. The optical coupling element includes a focusing element and a ferrule receiving bore. The arrayed device makes it possible to remove and replace one of the one channel sub-assemblies with another one channel sub-assembly. The small format optical subassembly of the one channel sub-assembly may be a transmitter or a receiver. Thus, the device is a modular, high-density, multiple optical transmitter/receiver array.

The arrayed device corresponding the Abstract is shown in Fig. 31 showing multiple elements of reference 1312 which is disclosed in detail in Fig. 23 describing the ferrule for element '30' and '32' of Fig. 2. Hence, the argued limitation is met by the prior art of Gilliland; therefore, examiner maintains the grounds of rejection made in office action mailed October 11, 2007.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gilliland et al. (US 6,416,238). In Fig. 1, Gilliland discloses an optical assembly comprising a package (10) including an optoelectronic component; an alignment feature (20) mounted to a surface of the package; and a sleeve (30) defining only one bore (32) with an inner surface having a constant inner diameter for receiving and contacting outer surfaces of the alignment feature (20) and a ferrule of a fiber optic connector when the alignment feature and the ferrule are inserted into the bore at opposite ends of the bore so they can be aligned relative to each other (see Abstract).

In terms of claim 2, an optical assembly comprising a package (10) including an optoelectronic component; an alignment feature (20) mounted to a surface of the package; and a sleeve (30) defining only one bore (32) with an inner surface having a constant inner diameter; a fiber optic connector comprising a ferrule wherein the alignment feature and the ferrule are inserted into the bore at opposite ends of the bore so they can be aligned relative to each other (see Abstract).

In terms of claim 4, the transparent element (20) is a solid post comprising a transmissive material allowing a light emitted by the package to pass through.

Regarding claim 7, Gilliland discloses the transceiver such as one disclosed in the reference would be coupled to a LC connector (col. 1, line 55-67).

In terms of claims 8 and 9, the package that pertains to Gilliland invention is a TO style laser diode package (col. 1, lines 13-31).

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gilliland in view of Yonemura et al. (US 6,540,412 B2).

Gilliland discloses the invention of claim 1, however, Gilliland does not explicitly disclose the alignment feature is a cylindrical post having a hole allowing a light emitted by the package to pass through.

Yonemura discloses a transceiver having an alignment feature (22d) that is mounted to a base (28) wherein a sleeve having an inner diameter that makes contact to the outer surfaces of the alignment feature when press-fitted.

It would have been obvious to one having ordinary skill in the art to recognize the alignment feature (20) taught by Gilliland would be modifiable with a similar size having a bore that would allow a light emitted by the package to pass through. **The motivation** for making such modification is one of cost effectiveness versus performance quality. One having ordinary skill in the art would use a refractive index matching transparent material for light to emit through since light would be better guided through refractive index matching transparent material than through air within in the bore of a the post. However, the post having a bore may

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be fabricated from any desired material that would best suit the application. Therefore choosing the best suit material at a lower cost would be more cost effective.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gilliland in view of Irie et al. (US 6,354,747 B1).

Gilliland discloses the invention of claim 1, however, Gilliland does not explicitly disclose the alignment feature is a solid partial sphere comprising a transmissive material allowing a light emitted by the package to pass through.

Irie discloses a transceiver having an alignment feature (24a) that has a solid partial spherical lens wherein a sleeve having an inner diameter that makes contact to the outer surfaces of the alignment feature when press-fitted (Fig. 4A).

It would have been obvious to one having ordinary skill in the art to recognize the alignment feature (20) taught by Gilliland would be modifiable with a solid partial spherical lens that would allow a light emitted by the package to pass through. **The motivation** for using such a lens is to better collimate light from the package to the ferrule.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin D. Chiem whose telephone number is (571) 272-3102. The examiner can normally be reached on Monday - Thursday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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